



CONTACT

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Cables for variable frequency drives

STANDARDS

Product IEC 60228

Installation IEC 60092-350; IEC 60092-353; IEC 60092-360

Test a; IEC 60332-1; IEC 60332-3-22; IEC 60754-1; IEC 61034

APPLICATION

Motor supply cable for frequency converters controlled low voltage AC drives on ships, called VFD applications. MPRXCX® FLEXISHIP® EMC cables are designed with a special coverage, copper-polyester tape and braid, which provide a 100% EMC protection. Insulation with low dielectric constant is used to reduce reflected wave voltage peak magnitude.

Symmetrical insulated ground wires, placed in corner, can reduce reflected wave and return common mode noisy currents back to the drive. Enhanced insulation is implemented for 1.8/3(3.6) kV cable to fulfil periodic peak voltage up to 3 kV due to harmonics. These cables are used on board of ships in all locations for fixed installations.

Design

1. **Conductor**
Flexible bare copper
Class 5
2. **Insulation**
XLPE (cross-linked polyethylene)
3. **Optional**
Symmetrical return earth conductors
4. **Inner covering**
Lapped or extruded
5. **Screen / Armouring**
Copper / polyester tape
Bare copper braid
6. **Outer sheath**
Polyolefin SHF1
Colour: red

Example of marking:

LYNXEO 279 MPRXCX FLEXISHIP EMC 1.8/3kV "n"x"s"mm² 90°C
 IEC 60092-353 IEC 60332-3-22 Cat. A ww/yy + metric marking

Core Identification

3 cores: black-grey-brown

Earth: green/yellow split in 3 conductors



Conductor flexibility
Flexible class 5



Halogen free
IEC 60754-1



Rated Voltage U_o/U
(Um)
1.8 / 3 (3.6) kV



Fire retardant
EN IEC 60332-3-22
(cat A)



Flame retardant
IEC 60332-1



Smoke density
IEC 61034



Gases corrosivity
IEC 60754-2



Electro magnetic
interference
resistance
Yes

CHARACTERISTICS**Construction characteristics**

Conductor material	Bare copper
Conductor flexibility	Flexible class 5
Insulation	XLPE (Cross-linked Polyethylene)
Screen	Copper - Polyester tape
Inner sheath	Lapped or extruded inner covering
Armour type	Bare copper braid
Outer sheath	Polyolefin
With Green/Yellow core	No
Sheath colour	Red
Halogen free	IEC 60754-1
Construction type	1x70

Dimensional characteristics

Number of cores	1
Conductor cross-section	70 mm ²
Nominal outer diameter	20.7 mm
Minimum outer diameter	20.0 mm
Maximum outer diameter	22.5 mm
Approximate weight	1020 kg/km
Earth conductor cross section	0 mm ²
Number of auxiliary conductors	0

Electrical characteristics

Permissible current rating in open air	256 A
Rated Voltage U ₀ /U (U _m)	1.8 / 3 (3.6) kV

Usage characteristics

Fire retardant	EN IEC 60332-3-22 (cat A)
Flame retardant	IEC 60332-1
Smoke density	IEC 61034
Gases corrosivity	IEC 60754-2
Electro magnetic interference resistance	Yes
Operating temperature, range	-30 ... 80 °C
Max. conductor temperature in service	90 °C